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A PRACTICAL THEORY AND TREATMENT OF PULMON- ARY TUBERCULOSIS.

BY FRANK S. PARSONS, M. D.,
PHILADELPHIA, PA.

Editor of The Times and Register.

(Continued from Last Number).

CLIMATE.

Ozone is an indispensable aid to the successful treatment of pulmonary tuberculosis. Cities, which have been cleared of all forest growth are not the ideal locations for the consumptive to dwell in. Vegetation, in healthy and luxuriant growth, absorbs the carbon dioxide and gives out oxygen. Other elements also enter into the question of climate for consumptives, such as dryness of the air, altitude and drainage.

Without entering into a discussion of this subject it may here be stated that the only way to test a given location recommended a phthisical person to reside in, is for such an one to try the various localities, if practicable, and make a permanent abode in the one which agrees best with his individual constitution. Colorado, as a health resort for consumptives, is no place for a victim of the third stage of the disease. Fibroid phthisis and bronchial irritation, on the other hand, do not contraindicate residence there. Except in excessively high altitudes the liability to hemorrhage is not greater than in other localities.

North Carolina is fast coming to

the front as a health resort for the tuberculous, and properly, too. The region in and around Southern Pines presents all the advantages of climatic regularity desirable in any stage of the disease. The soil is sandy, the air dry, an invigorating feeling exists from the ozonized atmosphere, and, being situated in the midst of the pine districts of North Carolina, there is every element conducive to health in the locality.

Southern California has long been one of the most famous health resorts in America. Its balmy atmosphere, absence of dampness and equable temperature make it a very desirable place in which to reside. Other localities might be mentioned, but of these the writer has personal knowledge.

The application of oxygen inhalations, while of some value in the treatment of phthisis, is by no means as satisfactory as the residence in ozonized atmospheres—the probable reason of this being that oxygen given by inhalation through an apparatus cannot be constantly applied, and the good that results, for a few hours after this mode of administration has been employed, is more than counterbalanced by the necessity of breathing the normal atmospheric air of the locality of residence. In other words, the oxygen is not applied a sufficient length of time to do more than temporary good. Could a room be so arranged to furnish the patient a continuous ozonized atmosphere the results of the cabinet method of treatment might be improved.

HYGIENE AND EXERCISE.

Important as are proper diet and air for consumptives, no less so are regulated exercise and hygiene. It

is a well-known fact that the more a phthisical person can live out of doors the better are his chances for recovery. Protective clothing should always be worn next the skin. A daily plunge bath in cool water followed by invigorating friction of the skin with a coarse towel conduces to free action of the sweat glands and assists active elimination.

Moderate dumb-bell exercise, or with chest weights, assists in establishing freer circulation. Fatigue should not be encouraged in the performance of these duties, but the patient is to be instructed to stop short of weariness. Lung development should be practiced by drawing in air through a quill until the lungs are fully inflated, then allowing the air to be as gradually expired.

An important hygienic point in the treatment of tuberculous cases is proper clothing. A great number of consumptives think they must clad themselves heavily, especially about the chest, and, with this unfortunate idea, they generally wear two or three undershirts of wool, in addition to a chest protector. The result is that the skin of the chest is kept in an unnecessary state of excessive perspiration, which renders an individual the more susceptible to contract numerous "colds." The whole body should be evenly and warmly clad; silk and wool flannel to be preferred next the skin. Severity of weather to an extent demanding excessive weight of clothing indicates that a patient should seek a warmer clime for a residence.

Out-of-door life is essential for the welfare of phthisical persons. The sudden changes in temperature experienced by those who live in our northern districts, caused not only by storms, but by the relation between in-door and out-of-door heat, imply additional dangers to the contraction of "colds." For this reason, if for no other, should the consumptive live in warm climates where he can remain in the open air as much as possible.

Sea voyages are useful in a proportion of cases. The exposure and out-of-door life, necessarily led in a long sea trip, are very beneficial.

MEDICATION.

Elimination is the first principle to consider in the medicinal treatment of phthisis, and this relates with the extent of pathological changes which have taken place in a given case. It is essential that an obstruction, wherever it is, be removed. Elimination does not necessarily imply that associate excrementory organs must be called into excessive activity in order that the system may be relieved of stagnant waste. The chances are that good results from this practice will be wanting. Elimination must come gradually by judicious employment, from time to time, of agents which will promote absorption of the pathological agent obstructing. Nutritious elements causing obstruction by becoming excess of waste must be avoided. On the other hand, oxidation and organization of new tissue should be encouraged. Cure of tuberculous deposits will come by suppuration and absorption, and for this reason we need alteratives, because such pathological changes exist.

To a large degree cure can be accomplished by dietetic and climatic treatment tending to advance nutrition.

One of the most satisfactory methods of elimination and alteration which have been given the profession in late years bearing on this disease is a formula advocated by Dr. Barclay, of Pittsburg, and consisting of the bromide of gold and arsenic. Arsenic is a well-known alterative in phthisis and highly efficient as a tissue builder. The late Dr. E. A. Wood presented the therapeutic value of this formula, in all wasting diseases, two years back, in a paper before a Western medical association, the subject of which was so thoroughly circulated about the country that its quotation here is unnecessary. Practical experience with this formula bears out all the claims made for it. It is not to be considered as a specific for tuberculosis, in any sense of the word, but that it is an active eliminator and alterator there can be no doubt in the minds of those who have used it.

Iodine has long been established as useful in the treatment of tuberculous conditions. The syrup of hydriodic acid, as prepared by R. W. Gardner, gives the most serviceable form for internal administration, as it is less irritating to the stomach. Locally iodine may be applied to the lung area by inhalation with ether. Dr. Garretson advocates a few drops of the compound tincture of iodine in equal portion of sulphuric ether, to be held in the palm of the hand and placed close to the nose, when the vapor of the ether inspired will carry the iodine to all accessible portions of the lung.

Other alteratives may be employed with benefit when indicated.

Symptomatic medication for pulmonary tuberculosis, as with most chronic ailments, is directed to a variety of complications which arise during the course of the disease. For the indications in which it is necessary to employ symptomatic medication the physician is to be governed by the individual case in hand. As a rule, the least medication employed is best, attention being directed to nutritional and climatic treatment.

Catarrh of the stomach has been mentioned and its treatment indicated. Catarrh of the nasal passages may be efficiently combated by a diluted hydrozone spray or Carl Seiler's formula. In acute exacerbations of this affection I have seen good temporary results from the employment of the following formula:

R. Cocaine hydrochlor.	grains vi
Bismuth subcarb.	drachms, ss
Talc.	drachms, iss

M. thoroughly.

Sig. Snuff every four hours.

In chronic catarrh a mild astringent powder or boric acid may be added to the above. Atomization of medications apply to the topical treatment of nasal catarrh. Mr. Marchand has invented an efficient instrument with an attachment for applying ozone, made from glycerine and peroxide of hydrogen.

Anorexia, dependent on a catarrhal state of the stomach or the general debility of phthisis, is not to be

taken as an indication that food is not required. This state is often overcome by treatment of the stomach, combined with small but frequent feedings. Such agents as promote digestion, papoid, pepsin, pancreatin and one of the dilute mineral acids, aid the assimilation of food in this condition and indirectly promote appetite. Gaseous eructations call for the employment of bismuth in addition to the above.

Attacks of pleuritic pain require sinapisms to the chest wall and morphia. When the latter is used less discomfort will be experienced afterward if atropia is combined.

Fever, unless excessive, rarely requires treatment. The employment of phenacetin often prevents active fever and quiets the nervous system beside.

Night-sweats, when excessive, tax the patience of the physician, and it will be found that no drug can be relied upon to prevent this disagreeable phenomenon in every case. Among those holding an efficient position are ergot, atropia, aromatic sulphuric acid and agaric.

Cough does not call for active treatment. Occasionally, when hard and dry, quieting preparations may be necessary. Nauseating expectorants should not be given. Paregoric and the preparations of ammonia are sometimes beneficial. When cough is accompanied with abundant expectoration I have seen good results from the smoking of pure cubebs; the smoke being drawn well into the lungs. Even ladies soon become accustomed to the use of this remedy.

Bronchial hemorrhage requires active treatment. When due to a congestive state, remedies applicable to the lessening of blood pressure are indicated. If due to ulceration contraction of the lumen of blood-vessels should be encouraged. During the hemorrhage common salt in large doses is generally efficient. Ergot, or ergotin, hypodermically administered, acetate of lead or tannic acid are recommended. Temporary ligation of a limb is often useful in controlling hemorrhage. This should only be employed during the presence of the physician.

Symptomatic medication, in this article, has only been outlined. The circumstances of the patient and the peculiarity of this disease require that the physician be one whose sound judgment and educated sense is equal to the task of meeting any symptomatic indication with the most efficient remedy at his command. The most hopeless cases to treat are among the poor, where poverty deprives the victim of phthisis of the necessities for even palliative treatment.

The primal thought must be directed to the restoration of perfect elimination, especially in the localities obstructed. For this reason the consideration of antiseptic medication has been omitted, the author recognizing the fact that very little good has been accomplished through this plan of treatment. Certain drugs of the antiseptic class have seemed beneficial at times, especially to appetite and digestion. Their action may in some degree be attributed to stimulation of elimination.

It cannot confidently be expected that any specific will ever be found for the cure of this disease. Phthisis arises from a combination of conditions which require a combination of therapeutical measures to eradicate. Good sanitation and cleanliness are essential for health among the well, and much more important are these virtues among the sick.

718 Betz Building, Philadelphia.

(The End.)

Opposition to the use of the antitoxine treatment for diphtheria has already taken an organized form in England. A deputation, headed by Lord Coleridge, has protested to the authorities against its use in the hospitals, on the ground that "public money ought not to be devoted to experiments in psychology."

Flammarion says the world is cooling off, and that Europe has lost two degrees this century.

UNUSUAL TYPES OF CHRONIC ABDOMINAL HERNIA.

BY THOMAS H. MANLEY, M. D.

Visiting Surgeon to Harlem Hospital.

(NEW YORK.)

The common, ordinary varieties of umbilical, inguinal and femoral herniae, when fully matured are usually readily recognized, and safely treated by some mechanical appliance. There is, however, a deviation of the development sometimes witnessed, in various areas of the abdominal walls, which, while it is wanting the clinical likeness of rupture, is yet, anatomically, quite identical. To this aberration of structural composition in the primordial stages of development, with a few notes on exomphacete, my attention will be now directed; though, as the subject is so large and important, nothing more than a rudimentary sketch of it can be under-

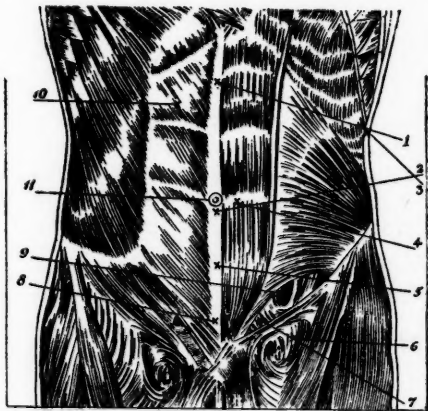


Fig. 1. Normal Openings in Abdominal Walls, with Anatomical Areas of Diminished Resistance (Diagrammatic).

1. Median line at divergence of Recti. 2. Right Umbilical Zone. 3. Petit's Triangle. 4. Left Umbilical Zone. 5. Median line. 6. Obturator Foramen. 7. Femoral arch. 8. External Ring. 9. Internal Ring. 10. Right Hypochondrium. 11. Navel opening.

taken with the limited space at my command; and, therefore, my aim will be accomplished if these few notes may induce others to take up the subject and present it to the profession in fullness and detail.

There are many fragmentary reports of the class of cases here, considered in surgical literature, especially, since modern art has so enormously reduced the death rate in abdominal operations; but I am familiar with no author who has attempted to systematically analyze* them in a methodical way except Zabe, the preface to whose brochure is ably written by the eminent Dujardin Beaumetz, of Paris.

To this valuable contribution I am much indebted for an elucidation of a condition which formerly seemed exceedingly obscure to me, and from it four of these illustrations are borrowed.

ETIOLOGY OR CAUSATION OF LOCALIZED, OF ECTOPIC VISCERAL (DIMINUTIVE OR COLOSSAL VENTRAL HERNIA).

First in order, comes defective development. The parietal peritoneum may be, in places, thinned or perforated, so that when on moderate strain or effort, a fringe of omentum insinuates itself and becomes fixed for the time, or advances onward.

When the peritoneal defect is protected by an osseous or tendinous wall, or advances towards the centre of a thick mass of muscle, it is restrained from the advance. It is only at, or in close contact with the umbilical opening, or through the intermuscular spaces, that those irregular hernia are generally observed.

Statistics seem to prove, that they are more commonly encountered in women than in men. This is because, perhaps, the muscular development over the abdominal planes is not so strong in females as in males, and also for the reason that the parietes are subjected to great strain, which is sometimes succeeded by weakening or laceration of the ab-

dominal muscles in parturient women.

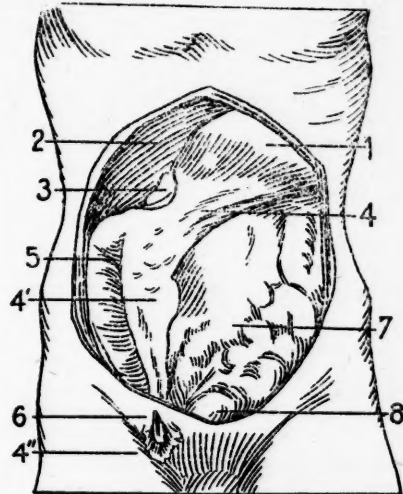


Fig. 2. Gastro-Intestinal Bridle of Omentum caught and dragged through the internal ring.

1. Stomach. 2. Liver. 3. Gall-Bladder. 4-4-4'. The great omentum, carrying the stomach down with it. 5. Ascending colon. 6. Inguinal hernia, consisting of intestine. 7. Mass of elongated intestine and mesentery. 8. Bladder.

Polysarca, an excessively fat omentum, or elongated mesentery, an excess of intestine, inter-abdominal pressure, and probably, various abdominal traumatism each, and all lend their influence in the development of these protrusions.

MORBID ANATOMY.

From the segmentation of the vitellus in the very early stages of foetal development, assymetry and imperfect formation of some region or organ of the foetus is evident, on minute inspection, in very many instances.

In the early stages of development a portion of the intestine protrudes through the umbilicus, where the first intestinal convolutions appear. It is at this site that we will most often witness congenital herniae; which, as a rule, disappear soon after birth, to return, however, later in many females.

The lateral abdominal walls advance from the sides of the spine and fuse, later, evenly in the

*Docteur Zabe, *Dyspeptiques et Obeses Du Ventre*.

sagittal plane. The mesentery is primarily formed of two perpendicular folds, attached to the spinal column. A portion of the peritoneal membrane, in a quadruple fold from the stomach, extends to the colon, to enclose the floating viscera, as process of formation advances. During the infolding process, the omentum may form adhesions with the parietal peritoneum, or make its way in epiploical masses through the muscular girth of the belly.

ble. They may thus augment in size, but there is little hope of their spontaneous recession, as their advance is in one direction only. They are not uncommonly incarcerated, and strangulation is one of the serious accidents which may at any time, on great strain, set in.

These extrusions are almost invariably a source of distress and misery to the afflicted.

The omentum is everywhere freely ramified with filaments of the vagus

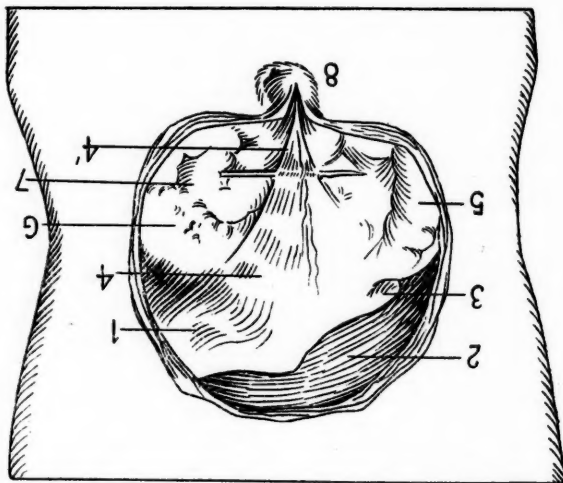


Fig. 3. Gastro-Umbilical Bridle.

1. Stomach. 2. Liver. 3. Gall-Bladder. 4. A gastro-umbilical apron of omentum implanted in umbilical opening. 5. Ascending colon. 6. Mass of epiploon of small intestine. 7. Small intestine. 8. Longitudinal opening in navel aperture.

These extrusions consist almost invariably of omental masses of various density and contour. For instance, in some we will find simply a rounded, hard mass of fat, while in not an inconsiderable number the omentum makes its way through, or partly through, the abdomen, to branch out into rootlets, which take a most tortuous course, and, by adhesive inflammation, become so incorporated with the adjacent tissues as to be quite inseparable. These epigastric, umbilical or ventral herniae, having no independent, serous envelope, are always devoid of a sac.

In consequence of their firm adhesions they are invariably irreduc-

and sympathetic, and, therefore, extremely sensitive to tension or pressure. The stroma of the mesentery is made up chiefly of lymphoid, adipose and loose fibrous connective tissue, highly prone to inflammatory changes.

In time, inflammation, starting at the periphery, extends backward, towards the deeper organs. The sensitive, serous wall of the bowel acquires adhesions and follows along the omental stalk, which now keeps up a constant "tug" on it, until the yielding portal finally gives and allows a knuckle of intestine, or part of its wall to slip through, and perchance, become nipped in its em-

brace. It is well to always bear in mind what may be regarded as an axiom, in hernial pathology, viz., that in every case of strangulation, succeeding an epiplocele we will invariably find that the intestine constitutes part of the hernial mass, as a secondary extrusion.

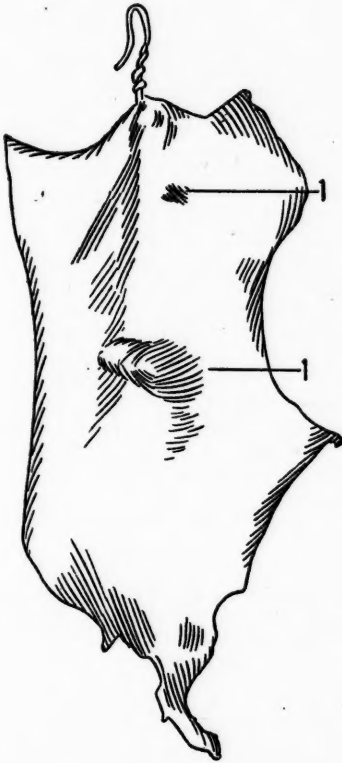


Fig. 4. Hernial Pouches (after Dupuytren).

1-1. Pouches.

SYMPTOMATOLOGY AND DIAGNOSIS.

The symptoms in this class of hernial protrusions are chiefly of two orders, viz.: First, those of a functional character, and somewhat intermittent, according to condition, age and occupation. These are often exceedingly ambiguous and deceptive, unless we apply more than ordinary caution, and penetration to

interpret them. Let it be borne in mind, that their distinctive peculiarity is their reflex character. The patient has pain in the back, an intercostal neuralgia, or dragging in the loin, a feeling of emptiness in the epigastrium. She may have nausea, constipation or diarrhea.

One woman who came under my care having a small ventral hernia, through the right semi-lunaris, had been actively treated for gall-stones; another—a female, too—had a nodular omental mass near the anterior spine—superior—of the ilium, and was in great pain; was supposed to have the omnipresent appendicitis; while an old man, who had a hernial tumor, about the size of a small marble, coming out directly through the centre of the tendon of the rectus, above the pubis, so complained of vassical distress, that he was sup-

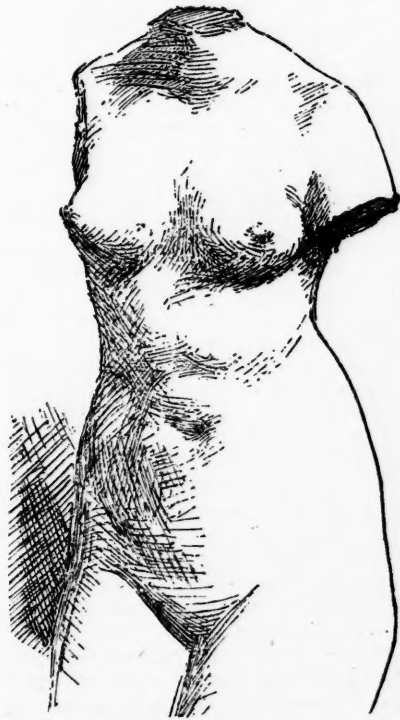


Fig. 5. The Ideal Navel.
(after an antique Venus).

posed to have cancer of the bladder.

In order to make an accurate diagnosis in these cases, and avoid every source of error, not only must the clinical history be most thoroughly inquired into, but we should not pronounce an opinion until all the abdominal areas have been examined with precise exactness and completeness. Urgent symptoms here, mean serious trouble.

In the second class, violent and sudden pain with vomiting, points to strangulation. Let us be cautious that these symptoms are not misinterpreted; i. e., that they are not mistaken for other ailments; or, that without a proper examination we do not pronounce the symptoms as attributable to internal strangulation, and further imperil life by an abdominal-section, while the real seat of the lesion is in the abdominal wall, which may be relieved by a much more simple operation.

TREATMENT.

When there are no constitutional disturbances from these erratic protrusions of the abdominal viscera nothing need to be done, except to avoid anything which calls for severe straining. Constipation should be prevented. When they are a source of distress or inconvenience we may treat them by local support and bandaging, which, failing, we should not hesitate to recommend operative measures.

Surgical therapy, properly instituted, should entail little danger to life here, and is always radical and permanent in its effects.

It goes without saying, that in the event of strangulation, stercoraceous vomiting, always points to the intestine being compromised, and that an immediate celotomy with radical care superadded must be at once resorted to, as the only possible hope for our patient.

All strangulated herniae, through the navel opening, or through any part of the abdominal areas above a horizontal line, drawn through it are always of greater gravity than those in the lower zones; because the peritonum is that segment of the intes-

tine most liable to be engaged here, and it is well known that the nearer the strangulated coil is, to the stomach, the greater is the danger to life from collapse and shock.

115 West Forty-ninth st.

COMMON MEMBRANOUS SORE THROAT.

The correctness of the position taken by Professor J. Solis-Cohen, Sir Morell Mackenzie and other authors, as to the existence of membranous sore throat not diphtheric in character, has come to be universally admitted, and the claims advanced for certain methods of treatment in diphtheria proved to be based upon erroneous diagnosis. A recent illustration of this fact has come under notice at the Laboratory of Bacteriology, where cultures from three cases of membranous sore throat, much resembling diphtheria in appearance, in two of which there was high fever accompanied with constitutional depression, proved to be free from Klebs-Loeffler bacilli.—Phila. Polyclinic.

THE TREATMENT OF CHRONIC ULCERS BY THE ELECTROSTATIC BRUSH DISCHARGE.

Marquant (Arch. d'Electr. Med., August and September, 1894) sums up his experiences in 22 cases of chronic ulcer treated by the brush discharge as follows: The treatment greatly assists the healing of the ulcers. In young people whose general health is good the progress is rapid, the ulcers at once assuming a healthy aspect and proceeding to cicatrization. In patients who are older, or of an unsound constitution, the improvement does not so soon become evident, but nevertheless cicatrization is promoted. The cases, chiefly old varicose ulcers of the leg, are reported at length, and the results obtained seem to have been most striking. Treatment was repeated twice a week. The positive pole was used.

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THE CARE OF THE NAVEL.

Doktor (Archiv fur Gynakologie, Bd. xlv., H. 3) reports his experience relative to the treatment of the umbilicus in new-born infants and the prevention of infections. "In new-born infants the navel forms a columnar projection of the skin, on the top of which the cord is attached—a sharp line of demarcation, the navel ring, separating the cord from the skin. On its margin are numerous vessels that go to the border of Wharton's jelly, but do not enter into it. When the cord is ligated its tissues lose their viability, and must separate and fall away, leaving the wound covered with a living structure. We must regard the navel as a physiological wound of the abdomen, of the new-born, its healing differing in no way from that of any other wound, the only peculiarity of the process being the topography of the wound. In typical cases it heals by first intention. This small wound is specially liable to infection and re-

sultant maladies, light or severe:—

(1) Because of its condition; it is not merely a wound of the abdominal skin, but also of its wall and in closest proximity to the abdominal membrane (peritoneum), which is very susceptible to infection. (2) The peculiarity that three great vessels lie free in this wound. (3) The third great factor tending to infection is the disproportionately large mass of dead tissue—the remains of the cord. (4) Again, this wound is peculiarly inclined to an excessive formation of granulations. (5) The frequency of development of anomalies and aberrations of the umbilicus also predisposes it to disease. According to Eros, 68 per cent. of umbilical wounds do not heal in a normal manner; and of these cases 45 per cent. suffer from fever. How often these cases terminate fatally is not known. In treating the navel the aim is to obtain healing without infection. The ordinary method is to simply ligate the cord some eight to ten centimetres from the body and wrap it in an oiled rag, after careful disinfection with sublimate solution, 1:1000, and then binding it to the abdomen with a bandage. At each bathing of the child the cord is washed, and if there be not much secretion a new bandage is applied, or a cotton wad is placed over the navel first. Too often cleanliness in the latter matter is neglected by the nurse. The author omitted the oiling of the rag in the above method, as it hindered mummification. The temperature was taken twice daily. Iodoform was applied to the wound, or, if needed, a weak carbolized wash. With the above treatment, 35 per cent. of cases had fever, and of these 16 per cent. showed infection. The plan was then changed. The cord was removed as early as possible and all wetting omitted. The bandage was changed daily. After this, 25.8 per cent. showed a rise of temperature, and of these 10 per cent. had infection. Further improvement resulted when efforts were made to hasten mummification of the cord. Ligatures applied closely to the belly were next tried, the stump being one centimetre long. This gave 11.88

per cent. of fever and 3.46 per cent. of infection. As a general rule, fever occurring during the healing of the navel is due to infection, notwithstanding the failure of local symptoms, and especially the coincident frequent digestive disturbances cause no fever. The author summarizes the treatment of the umbilicus as follows: (1) Cut the cord as close as possible. (2) The bandage once applied should not be changed except for good cause, and preferably the bath should be omitted."

This method of treating the umbilical cord we advocated several years ago, in a paper read before the American Medical Association. When dry antiseptic cotton is used to wrap the cord in there will arise no odor during its desiccation.

The bath should be omitted after the cord has been once dressed and the latter should remain undisturbed. No oily rag should be employed as a dressing.

THE TREATMENT OF TRAUMATIC STRICTURES OF THE URETHRA AND PERSISTENT FISTULAE IN PERINEO.

Mr. Pearce Gould, in a recent issue of the "Medical Press," contributes an important essay on the treatment of traumatic strictures, in the perineum, and advises that in every instance we should cut down as soon as urinary extravasation appears, seek for the divided ends of the urethra and suture it; then close in all the overlying tissues, layer by layer, with a view of securing primary union. He reports two cases, both treated this way, by himself, with the most gratifying results.

This operation was first successfully performed in America by our distinguished countryman, Dr. W. A. Wile, of Danbury, Conn.

Chronic urinary fistula, after stricture or abscess, has heretofore been the bane of surgery; but Guyon, of Paris, and Manley, of New York, have both reported the most rebel-

lous cases of this distressing infirmity as successfully treated by resecting an area of the cicatricial urethral tissue, and then drawing the separated ends together and restoring the continuity of the canal.

It is not generally known that the urethra possesses great longitudinal as well as lateral distensile properties. By taking advantage of this knowledge we may, with antiseptic precautions and skillful manipulating of our cases, treat and cure the most inveterate of perineal urinary fistulae.

The insect, according to Professor Smith, State Entomologist of New Jersey, has no internal skeleton, but carries its "bones" all on the outside. Insects differ among themselves; thus bugs get their living by piercing and sucking, whereas beetles get theirs by biting and chewing. To kill the one we must choke or strangle it, whereas, with the other, we can compel it to swallow the poison. Thus there are, therefore, two sorts of insecticides—the contact poisons for bugs and the stomach poisons for beetles. No one insecticide can meet both conditions, and any one advertised to do so may be set down at once as a fraud. Stomach poisons are Paris green and London purple, otherwise known as the arsenites. Contact poisons are any fine dust or film that will cover over or clog the breathing tubes; thus, whale-oil soap, or pyrethium powder, or ground cinnamon, or tobacco dust. "Other things being equal," said Professor Smith, "dry or powdered insecticides are the more effectual the finer they are."

Mortuary tables show that the average duration of the life of women in European countries is something less than that of men. Notwithstanding this fact, of the list of centenarians collected by the British Association a fraction over two-thirds were women.

Correspondence

TO STUDY CLIMATOLOGY.

Washington, D. C.

We have received from the Weather Bureau of the U. S. Department of Agriculture, Washington, D. C., the following notice:

"The interest manifested by every class of people in the subject of climate and its influence on health and disease has determined the Honorable the Secretary of Agriculture, through the medium of the Weather Bureau, to undertake the systematic investigation of the subject.

"It is hoped to make the proposed investigation of interest and value to all, but especially to the medical and sanitary professions, and to the large number of persons who seek, by visitation of health resorts and change of climate, either to restore health or prolong lives incurably affected or to ward off threatened disease.

"The study of the climates of the country in connection with the indigenous diseases should be of material service to every community, in showing to what degree local climatic peculiarities may favor or combat the development of the different diseases, and by suggesting, in many instances, supplementary sanitary precautions; also by indicating to what part of the country invalids and health seekers may be sent to find climatic surroundings best adapted to the alleviation or cure of their particular cases.

"The hearty co-operation of the various boards of health, public sanitary authorities, sanitary associations and societies, and of physicians who may feel an interest in the work, is asked to achieve and perfect the aims of this investigation.

"No compensation can be offered for this co-operation other than to send, free of cost, the publications of the Bureau bearing upon climatology and its relation to health and disease to all those who assist in the work.

"Co-operation will consist in send-

ing to this office reports of vital statistics from the various localities. That these reports may be of value, it is evident to all that they should be accurate and complete, and be rendered promptly and regularly. Blank forms of reports have been prepared so as to occasion as little trouble and labor as possible on the part of the reporter, and will be furnished by the Bureau on application.

"At the very beginning of the investigation it is not possible to outline precisely the channels through which the results obtained will be made public, but it is hoped to publish soon a periodical devoted to climatology and its relations to health and disease. The publication will probably resemble in size and general appearance the present Monthly Weather Review, the subject matter being, of course, different.

"More detailed information will be furnished on application.

"MARK W. HARRINGTON,
"Chief of Bureau."

Surgery.

DR. T. H. MANLEY, New York.

COLLABORATOR.

EXTIRPATION OF VOLUMINOUS ANEURISMS.

M. Quenu presented a man, aet. 36, on whom he operated a year ago for a voluminous aneurism of the external iliac artery on the right side, and a fortnight later for an inguinal aneurism on the left side; these two aneurisms were treated by the method of extirpation with complete success. The patient, a clown by profession, was able to resume his work in October last. The debut of these tumors dated two years back; the right was of the size of a child's head, and occupied the iliac fossa and portion of the lower outlet. The left was smaller and situated across the Fallopiian ligament. Collateral circulation was quickly established in both limbs,

and no bad symptoms were observed, although the saphena vein on one side had to be sacrificed.—Med. Press.

TREATMENT OF SYNOVIAL CYSTS OF THE WRIST.

Professor Duplay, of the Hotel-Dieu, treats synovial cysts of the wrist by the simple method of injecting a few drops of tincture of iodine by means of the ordinary subcutaneous syringe. Without emptying the contents of the tumor, he injects from 6 to 10 drops of the tincture into the centre of the cysts and applies a compressed bandage. Generally one operation has been sufficient, but in certain cases he has been obliged to renew the injections twice or three times. On the third or fourth day he removes the bandage, when the tumor is found to have considerably diminished in volume. M. Duplay has never seen any inflammation as a consequence of the iodine. At the end of 10 days the cyst is entirely shriveled up.—Med. Press.

HOW TO TREAT A GONORRHEA.

M. Routier gave last week an interesting clinical lecture on the above subject at the Hopital Necker in which he rendered testimony to the researches of MM. Lavaux and Janet, who seemed to have rightly understood the proper indications in the treatment of such an affection. If the gonorrhea is still in the acute stage, M. Routier advises simple antiphlogistic treatment, but as soon as this stage is passed, and the malady has become subacute, he commences the treatment as followed by Janet with so much success, which consists in washing out by a continual stream not only the anterior, but also the posterior portion of the urethra. To practice these injections a reservoir of the capacity of two quarts is employed filled with a weak solution of permanganate of potash (one in two thousand). A tube of india rubber is attached to this reservoir two yards in length, and terminated by a small cannula in glass. The patient urinates im-

mediately before using the injection in order to expel any mucus accumulated in the canal. The reservoir is placed at a height of about five feet above the penis of the patient, and the cannula is inserted into the urethra; the liquid penetrates up to the sphincter, where it is arrested and flows back, thus washing out the anterior portion of the canal. The patient is then recommended to close the meatus by pressing on it with his fingers; the liquid finding no issue triumphs over the obstacle presented by the sphincter and penetrates into the bladder. The current is arrested when the patient feels a desire to micturate. The operation can be recommended once or twice at each seance, and renewed the following days. At the end of a week a cure is generally effected. In order to make sure that the patient is really cured Janet recommends that he should drink a quart of beer, that beverage being infallible to reproduce the "running" when improperly cured.—Med. Press.

HYDROCELE MULIEBRIS SIMULATING STRANGULATED INGUINAL HERNIA.

Liermann (Deutsche Med. Wochenschrift, November 15, 1894) related this case, which occurred in a woman, aged 38. She had noticed for three years a swelling in the right groin. In woman, as in man, a patent condition of the processus vaginalis is most frequent on the right side. The swelling was irreducible, and she had local tenderness, vomiting, and occasional constipation for a month. Resonance was clear on percussion. On admission to hospital the bowels were opened after a dose of castor oil. The usual incision was made in the inguinal region. A swelling the size of a hen's egg was exposed; on puncture a pale yellow fluid escaped. The surgeon thought he had opened the peritoneum, but it was simply the distended inguinal canal which contained two thin-walled cysts, each of the size of a hazel nut, and fixed to the canal by a short pedicle. They communicated with

each other by a short channel, through which a sound could be passed, and contained clear yellow fluid. They were excised, and the inguinal canal closed. The patient speedily recovered.

Therapeutics.

DR. LOUIS LEWIS, Philadelphia.
COLLABORATOR.

GUAIACOL CARBONATE.

Holscher (Berl. klin. Woch., December 3, 1894) has used this substance with good results in 100 cases of phthisis in addition to the 60 cases reported some time ago (Epitome, January 9, 1894, par. 40). He first draws attention to the advantages of this preparation over creosote or even pure guaiacol. The digestive functions are not disturbed. The amount absorbed into the blood is small and the action therefore mild. The author thinks that the poisons circulating in the blood of the phthisical are in this way made inert. He mostly gives 2 to 3 g. in the day in two doses; in cases where no result is apparent he proceeds slowly to 6 g. He has seen striking improvement in some advanced cases of phthisis. The appetite is increased, and the assimilation of food promoted. Details are given in 6 cases, some of which were advanced when they first came under observation two or four years ago. Guaiacol carbonate is practically useless in acute miliary tuberculosis.

KOLA.

The kola nut is bound to take as prominent a position in the *materia medica* of this country as it has in other parts of the world.

Its habitat is Africa. Its transplanted home by cultivation is the West Indies, and the natives as well as the medical profession of these sections have long recognized in the kola nut a great aid in performing feats of labor, tests of strength, or sustaining life in disease.

It resembles in its action coffee and cocoa, only in a more prominent

degree, and without any of the depressing influences which too often follow coffee drinking and the administration of cocoa. The active principles are said to be caffeine theobromine with an alkaloid peculiar to itself, and which is not yet fully described and isolated.

Aside from its value to the brain and muscle worker it is simply invaluable in the sick room.

It helps tide over the crises of disease, sustains the strength of the patient, does not interfere with nutrition, and some authors even go so far as to say that it assists the process of digestion.

In shocks, either due to accidents, traumatism, operations, syncope or fright, it is of great value, and will prove the surgeons' good friend as well as the physicians'.

In pyelitis it has done good service and is useful in various forms of heart disease, especially smokers' heart. In nervous prostration and nervous irritation it performs a service of inestimable value. In fact kola will prove, we are confident, one of the most valuable additions to our therapeutic armamentarium.—*New England Med. Monthly.*

EFFECT OF MASSAGE ON THE CIRCULATION.

Lauder Brunton and Tunncliffe (*Jour. of Phys.*, December, 1894) record the results of some careful observations on the effect of massage on the circulation. The experiments were undertaken in order to determine (1) the changes occurring in the circulation in a given group of muscles during and after massage; (2) the effect of massage of a large muscular area on the general blood pressure. The experiments were carried out on cats, and the method used was the determination of the amount of blood passing in a given time from the efferent vein. The general results obtained are: (1) that during massage the flow of blood is increased through the muscles; (2) immediately after the cessation of massage an accumulation of blood occurs in the massage muscles, which is followed by an increased flow

through them; (3) massage of a large muscular area causes just a slight rise of blood pressure followed by a fall which may amount to one-fifth of the initial blood pressure. Both during and after massage of muscles a lowering of peripheral resistance in the corresponding area takes place, and hence more blood is propelled at each heart beat from arteries to veins, and a fall of arterial tension ensues. The results are carefully compared with the effects of alternate compression and release of the arteries, and also with the effects of simply firmly grasping the muscles, both of which must be factors in the general result of massage. It was found that in each of these cases a rise and fall of pressure took place, but the effect was more transient. Gentle kneading was found to have more effect in causing a fall of blood pressure than either compression and release of both external iliac arteries or of the muscles of both thighs.

ON THE USE OF ANTIPYRIN IN LARGE DOSES.

By T. McCall Anderson, M. D.

The writer advocates the use of very large doses of antipyrin in certain neurotic cases. He says that personally he has had hardly any experience of its deleterious effects—at least of a serious nature—when employed with due precautions. He details the case of a boy, aged nine years, who had suffered for the previous two and a half years from severe fits of a hysterio-epileptic character, sometimes as many as 30 or 40 attacks occurring in a day. The treatment consisted of rest in bed, regulation of the bowels, and the exhibition of antipyrin in gradually-increasing doses, commencing with five grains, thrice daily. In three weeks he was taking twenty-five grains three times a day, with complete cessation of the attacks. The dose was then slightly lowered. The lad was dismissed from the hospital in two months as quite well, and it was reported later that there had been no

recurrence of the attacks. In another case a lad of 13 years, suffering from choreic movements of the right side, received under gradually increasing doses as much as 50 grains thrice daily. He left the hospital in six weeks quite well. In another violent case improvement was very rapid under similar treatment. Dr. Anderson sums up his experience in the following aphorisms: 1. Antipyrin is not the dangerous drug that some observers have led us to suppose. 2. It may be given with safety in large doses, but the initial dose must be small, and it must be slowly and cautiously increased under careful supervision. 3. In large doses it often yields surprisingly good results, and in chorea it is the only medicine from which cures may confidently be expected.—British Med. Journal.

THE VALUE OF A DOCTOR'S HEALTH.

Dr. W. S. Lumpkin, of Atlanta, Ga., sued that city for \$10,000 damages, alleging that the injurious fumes from an open sewer had ruined his health. The jury found in his favor to the amount of \$400.—Med. Record.

Medicine.

DR. E. W. BING, Chester, Pa.
COLLABORATOR.

THE DIAGNOSIS OF DIABETES AND GLYCOSURIA BY EXAMINATION OF THE BLOOD.

Bremer (Centralbl. f. d. med. Wissensch., December 8, 1894) describes a modification of Ehrlich's method of staining cover-glass preparations of blood with eosin and methyl blue. By this method of staining in normal blood, the red blood corpuscles appear brownish red, but the color varies from a clear reddish brown to a deep chestnut brown. The nuclei of the leucocytes stain blue. Bremer found that in diabetes and glycosuria the red blood corpuscles either remained completely unstained, or

they were simply tinted light yellow or greenish yellow. Only occasionally a small peripheral zone of the red corpuscle was tinged slightly red. Other minor changes were found in the leucocytes. With acid fuchsin and other so-called acid dyes the red corpuscles of diabetic blood stained just in the same manner as those of normal blood. It was only eosin which did not stain them. In order to determine whether this loss of staining affinity for eosin was due to the abnormal amount of sugar in diabetic urine, Bremer treated cover-glass preparations of normal blood with a solution of sugar. But he found that the red corpuscles still stained with eosin, as in normal blood. If, however, a cover-glass preparation of non-diabetic blood was floated for 25 to 30 minutes in a diabetic urine, the red corpuscles failed to stain brownish red with eosin; they remained unstained or were only slightly tinted yellow or greenish yellow, as in diabetic blood. But the red corpuscles in a cover-glass preparation of non-diabetic blood, treated with urine free from sugar, stained well with eosin. In glycosuria produced artificially by the administration of phloroglucin for three days the red corpuscles failed to stain with eosin, as in diabetes.

ULCERATIVE ENDOCARDITIS AND ACUTE ARTICULAR RHEUMATISM.

Leyden (Deut. med. Woch., December 6, 1894) first sketches the history of the bacteriology of malignant endocarditis. The cause of rheumatic endocarditis is not yet definitely known. This endocarditis is rarely (directly) fatal, and then only in a late stage, when the presence of micro-organisms is hardly to be expected. The fatal cases of rheumatic endocarditis may also be examples of a mixed infection, which possibility must be excluded. Although acute rheumatism is looked upon as an infective disease, yet bacteriological investigation has as yet only given uncertain results. In 4 of the author's 6 cases of acute

rheumatism a diplococcus was found in the vegetations quite different from other micro-organisms such as the staphylococcus, pneumococcus, etc. Gunther looked upon this micro-organism as a special one not hitherto described. Details are given of these 6 cases in which death took place somewhat early in the disease. In 2 of these cases there was ulcerative, and in 3 a vegetative or verrucous, endocarditis. In the remaining case there were extensive foci, both cellular and fibrous, in the myocardium, the valves being intact.

PNEUMONIA IN THE AGED.

Pneumonia in aged persons, according to Lemoine, should be treated by giving abundant liquid nourishment in broken doses, or quantities, soup, milk, eggs, peptone, meat juice, etc. He advises dry cups, the employment of tonics, alcohol, glycerophosphates, etc.

- | | |
|---------------------------------------|-----------|
| | Grams. |
| 1. R. Brandy | 40 |
| Tr. Kola | 10 |
| Syr. Acacia | 50 |
| In teaspoonful doses during 24 hours. | |
| 2. R. Glycerophosphato Soda... | .6 grms. |
| Tr. Nux Vom..... | 30 gtt. |
| Wine | 100 grms. |
| Four teaspoonfuls a day. | |

The necessity for strengthening the heart is met by caffeine and digitalis. Insomnia is treated by sulphonal or coderine. Chloral should be avoided. Diuresis should be encouraged.—Rev. de Therap.

Gallate of mercury in doses 5 cgms is advised in syphilis as being superior to other compounds of mercury.

HEADACHE IN CHILDREN.

This constitutes one of the most frequent of affections; they awaken anxiety, especially where there is any tendency to meningitis.

Headaches of "growth" are frequent in children who have grown fast in a relatively short time. They are accompanied with joint pains and swelling around the epiphyseal junctions, and frequently a slight degree of cardiac hypertrophy.

Rest is the best remedy. Headache is often due to overtasking the mental powers. Here again rest is

the cure, combined with regular exercise. Headache due to digestive disorders requires attention to the functional conditions combined with the use of baths and exercises.

Where disorder of the nervous system is the cause, as shown by hysteria, or epilepsy, antipyrin and bromides are useful.

Headache due to beginning meningitis is rebellious to all treatment. A possible cause of headache, which should always be considered, is syphilis, inherited. Chlorosis is also a cause of cephalagra, and is treated in the usual way by iron and hygienic means. Headache often results from Bright's disease also.—*Annales de Med.*

NEW ANTISEPTICS.

Phenocoll, used for wounds of all kinds in powder—watery solution, gauze or ointment. It equals iodoform in action, and is better, as it is odorless.

Argentamine, a combination of a silver salt with an organic base, which may be ethyldiamine, piperazine. Meisser calls argentamine the ethyldiamine phosphate of silver. This antiseptic does not coagulate albuminoids like most of the current antiseptics, and at the same time is more powerful than most of the others.—*Prog. Med.*

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

A PLUNGE INTO ELECTROTHERAPEUTICS.

"CROSSING THE RUBICON."

Continuing upon a line of thought suggested by our last article, let us next suppose that a canvasser or advertisement in the "Times and Register," or catalogue, or clerical report or some other effective influence has

aroused an interest in the subject of electricity in the mind of an established physician. He has, perhaps, a difficult case on his hands, which nothing else seems to benefit, and he is induced to look into the possibilities of an agent he has heard about, but never tried. He has a large medical library and he naturally turns to it for basic facts. In a dozen text books on practice, therapeutics and materia medica, aggregating 12,000 or 15,000 pages, he has the great, good fortune to find a score or two of pages which enlighten him as he desires. He reads all about Anodes and Cathodes, Labile and Stable applications; Ohm's law, electrotonus, R. D. Ions, milliamperes, Daniell cells, volts and induction coils, primary and secondary currents, rheotomes and rheophores and various other text book technicalities. This is all very interesting, although a trifle indefinite, but several diseases are quoted which electricity is said to be "good for"—with acknowledgments to Erb, Duchenne & Co.—and he writes to a dealer for advice as to "the best battery to buy." The dealer probably sends an illustrated price list, which is a veritable mine of information. It offers batteries at assorted rates from \$7.50 to \$250. It pictures a great variety of electrodes and appliances, some of which have neither existence nor practical use outside of the illustration. The high-priced cabinets are attractive, of course, but the prospective purchaser reasons very fairly that as he is without experience he had better learn on a cheap battery and buy a better one after he gets more skill. Moreover, he may not like electricity after he tries it, and it will be cheaper to throw away a \$10 instrument than one worth \$100.

Still he wants a reliable article and will not be too frugal in regard to price. Let us see what the catalogue offers: Machine No. 1, price \$7, "made to meet a demand for a low-priced battery for domestic use."

This will hardly do, for if the "electrician" encounters one in the hands of a patient he must be able to compete with a better article. No.

2 is \$12, and is stated to be "a very convenient form of battery for a physician or family use. It has the rapid vibrator, gives three variations of the faradic current and is sufficiently strong for ordinary treatment."

This is quite promising, but here is No. 3: "More desirable for a physician, has a large coil, rapid vibrator, gives three variations of the current, is furnished with handles, cords and sponge electrodes for \$20 list or \$15 net cash." This evidently is the one to buy, and it is ordered C. O. D. The Rubicon is crossed. The mysterious plunge into electricity is taken. The battery arrives. The circular directions for starting it into action are carefully studied, and the doctor is ready for work. The first patient that comes in is a man with lumbago. He is at once stripped to his waist, placed face downward on a table, and the sponges, "thoroughly moistened," as per circular, are rubbed up and down his back till he declares he has no more pain. He gets up astonished, and the doctor is a proud and happy man.

For a few days his cases all seem to run to lumbago, and he treats them with great success. Liniments become a back number, and tincture of iodine is simply nowhere. "There is nothing like electricity and a first-class battery!" The next day brings in a patient with an irritable spine, an irritable and congested uterus, and enough symptoms to indicate a dozen drugs. Ah! if he could only treat her with electricity! Perhaps he can! He writes to a gynecologist, who knows how, and learns by return mail that he may apply a sedative, rapidly interrupted high-tension current from a long, fine wire coil, say 1500 yards of No. 36 wire, using for the purpose a modified Apostoli's bipolar vaginal electrode. Hastening to his beautiful new battery to carry out this simple recommendation, he searches in vain for the long, fine wire coil, and the only electrodes he can find in the box are two which are covered with sponge, but evidently not intended for vaginal use.

Can it be that something is lack-

ing in his new outfit? What is meant by a high-tension coil, and why doesn't his battery have one? He lets the matter rest for a time and resorts to the traditional tampon for his patient's relief. He has, however, ordered a small work on electro-therapeutics, and when his old case of chronic endometritis comes in to remind him of her age-long woes, he chuckles gleefully over the surprise in store for her when she finds herself speedily cured by electricity. Out comes the new book, which will tell just how to do it.

But what is all this he reads about chemical galvano-caustic polar action, 100 milliamperes, Apostoli's method, platinum electrode, intra-uterine application? The directions with his elegant solid oak battery say nothing about "Apostoli," and if there is any platinum on his handsome sponge electrodes it must be under the sponge; and, at any rate, the directions do not disclose how one could be gotten into the uterus. Long and carefully he ponders over his battery before commencing treatment, and though it is clear that the "primary current (mild) binding posts: number one and two," must be correct for the galvano-caustic current, yet he is much puzzled about the milliamperes.

The directions say "the strength of the current is increased by drawing out the sliding cylinder," but fail to state how far out it must be drawn to equal 100 milliamperes. This is probably an insignificant oversight of the makers, and need not deter a practiced hand from beginning at once on the patient. Moreover, if one of the sponge electrodes won't go inside the uterus, why use it outside, of course. The electricity will go through all the same, and trifles like these must not prevent the patient from getting cured.

One month later—Case book record: "Electricity is remarkably efficient in lumbago. In a series of three cases treated by me the results were as follows: Cured, 100 per cent.; improved, 100 per cent.; unimproved, none. Fails in endometritis. In case faithfully treated bi-weekly for an entire month no

marked result was obtained, beyond the temporary relief of certain symptomatic conditions, not, perhaps, dependent upon the underlying diathesis. Too much should not be claimed for this empirical agent, as it evidently fails in a certain proportion of cases."

The first glamour of medical electricity was plainly wearing off. There could no longer be any doubt but that Erb, Duchenne & Co. were oversanguine as to its value, and like many another new-born fad its proper level was to be settled by time. Being disposed to give it a fair trial, however, he would not yet discard it entirely.

Soon after this date he received in the mail a reprint of an elaborate article on "Metallic Electrolysis" by a well-known and successful authority. It was a revelation to him. A method giving such grand results was too important to neglect. He must certainly get out his battery again and take to using it more freely than he had of late. The battery accordingly was carefully dusted and its youth renewed with fresh bichromate of potassium solution, per formula in the "Directions." His enthusiasm was roused to 104 degrees Fahrenheit by a second perusal of the following statement: "This method involves the use of attackable electrodes—copper, zinc, silver, K. I., etc.—with mild currents and long sittings. Electrolytic cataphoresis has already been employed in a vast variety of conditions, and nothing in modern medicine equals it in possibilities. It offers our best method of combating diseased conditions of all mucous membranes—those of the eye, nose, throat, urethra, vagina and uterus—also hemorrhoids, keloid, conjunctivitis, trachoma, acute and chronic; hypertrophic and atrophic rhinitis, ozena, urethritis, endometritis, inflammations of the adnexa, etc. In uterine cases this method is easier, and better than Apostoli's, and the benefit lasts longer."

In his mind's eye our hero fairly raked his town with a fine comb for cases of the above lesions, and dreamed he cured them so fast that

he fancied himself able to order a new road cart with an automatic driving lamp for a Christmas present to his wife (intending, of course, to use it himself occasionally in his professional calls).

Electricity was surely a therapeutic magician, and why every doctor did not at once buy and use a first-class electrical battery, with cords, sponge handles and solid oak box, was difficult to see. "These recent aids to science went far to make a professional life worth living," and turned the drudgery of curing urethritis, ozena and "female weakness" into a pleasant and refreshing pastime. The battery must not be allowed to rust again, and filled with these diverting thoughts the worthy doctor proceeded to overhaul his outfit and make ready for diseases of the mucous membranes. This time he was determined not to be baffled by anything. If he could not perform cupric electrolysis with his sponge electrodes at the start, he would write to New York for further instructions and find out how to do it. Critical inspection of his apparatus and an hour of experimental work indicated that something was lacking to complete his outfit. The next mail carried an order to New York for one set copper-tip electrodes, eight sizes, price \$7.33, per catalogue. They came C. O. D., and were brightly polished, arranged in a row, screwed upon a plate, and seemed to mark a new era in the career of the solid oak battery. They must be tried at once. But how? What would they fit on to? Were all to be used at once or only a few at a time? At last a brilliant idea presented itself. He would unscrew the sponges from the wood handles and then screw on two of the copper tips.

He ought to have thought of this before. Eight tips (four pairs) indicated that they were to be used two at a time. To his great amazement, an attempt to carry out this idea disclosed the singular fact that the screw threads of the copper tips would not fit the wood handles.

S. H. MONELL,

44 West 46th st., New York.

Miscellany.

Probably the most extraordinary journal in the world is published weekly at Athens. It is written entirely in verse, even to the advertisements.

THE HARD TIMES.

The funny man of the Washington Star says that the times are so hard that his doctor told him that even his blood was impoverished.—Lancet-Clinic.

As a result of the examination of 4000 eyes, Dr. Miles, of Bridgeport, Conn., found that 65 per cent. required glasses. The women and girls far exceed the men and boys. The period during which the people have the most trouble with their eyes is between 20 and 30.—Food.

THE EFFECT OF GRAVITY ON THE CIRCULATION.

A paper read before the Royal Society on December 13, 1894, by Mr. Leonard Hill on the "Influence of the Force of Gravity on the Circulation" draws attention to a point of great interest. One of the conditions necessary for the maintenance of life is the supply of a due amount of blood to the brain, a condition depending on a proper relation between the tonus of its vessels and of those supplying every other part of the body. This relation must alter with every variation of position. Putting it roughly, there would not be enough blood for all the regions of the body at the same time if all the vessels were relaxed, and an even distribution to different organs is only maintained by an exact co-ordination between the contractile action of the muscular walls of the vessels and such pressure within them as is due to gravity. Mr. Hill pointed out that the important duty of compensating for the simple hydrostatic effects of gravity in changes of position much be ascribed to the splanchnic vasomotor mechanism, and that the effects of changing the position afforded a most delicate test of the

condition of this mechanism. He also showed that the compensation was far more complete in upright animals such as monkeys than in rabbits, cats, or dogs, and, therefore, was probably still more complete in man. These investigations are of all the more interest when read side by side with the clinical observations of Dr. Oliver, who has endeavored by a special instrument to measure the calibre of the arteries and to demonstrate their variations under different circumstances of position, showing that loss of this variability of calibre with changing posture is to be looked on as indicating a departure from health. Mr. Hill pointed out that the influence of gravity became of vital importance whenever the power of compensation was damaged by paralysis of the splanchnic vaso-constrictors, as by shock, by asphyxia, or by some poison such as chloroform, for, under such circumstances, in the feet-down position, the blood drained into the abdominal veins, the heart emptied, and the cerebral circulation ceased. On the other hand, although the feet-up position generally caused no ill consequences, it might happen if the heart was affected, as by cholera, that it might be stopped altogether by the inrush of a large quantity of blood if pressure were applied to the abdomen too suddenly. Besides its action on the heart, chloroform rapidly paralyzed the compensatory vasomotor mechanism, whereas ether acted on it very slowly. One of the dangers of chloroform was then that by destroying this compensation for gravity the patient's circulation was left peculiarly under the influence of posture, and death might result from the abdomen being placed at a lower level than the heart. Mr. Hill also suggested that emotional syncope was not so much due to direct implication of the nervous mechanism of the heart as to paralysis of the splanchnic area, and a case was quoted where compression of the abdomen immediately removed the syncopal condition. The picture of the increasing vital co-ordination between the different portions of the circulatory apparatus to compen-

state for the varying effects of posture is a very interesting one, and the suggestion that a suspension of this co-ordination may take place under certain circumstances, allowing the blood to drain by gravity into paralyzed areas, would explain what ordinary teaching does not make very clear—the striking contrast clinically observed between cardiac failure and what is so commonly spoken of as cardiac syncope.—British Medical Journal.

GRADATION OF MEDICAL FEES.

We read in the newspapers that the Russian Government has leveled up and down the medical fees chargeable by practitioners by means of a definite scale graduated according to the income of the patient. In this country, however convenient such a scale might be on many occasions, it would be quite impossible to impose a fixed level of remuneration in medicine or in any other calling. A physician's fee can only be defined by his skill, experience and popularity, and the only purpose which a scale can fulfil is to afford an indication as to the amount of fee which it might be reasonable to charge to patients of various paying capacities.—Med. Press.

THE RELATION BETWEEN RICKETS AND LARYNGEAL SPASM.

Out of 1600 rickety children observed by J. Comby in a Paris dispensary, only one-tenth had convulsions, whilst Henoeh attributes two-thirds of the cases of glottic spasm to rickets. Although rickets is so common in Paris, glottic spasm is very rare, and the author believes there is a relation of cause and effect between rickets and laryngeal spasm. Still less is this so with dentition (even when delayed and perverted by rickets). Among 70,000 children seen during 11 years Comby never saw convulsions of purely dental origin, and never had occasion to lance the gums. Craniotabes, sometimes assumed as a cause of gastric spasm, if looked for is found with

“extraordinary frequency,” and in cases where there has never been any convulsion or glottic spasm. The bond that unites the two morbid states (rickets and convulsions), is dyspepsia (dilatation of the stomach, diarrhoea, constipation, etc.) with autointoxication, from which arise all these nervous disorders, and in great part even rickets itself.—La Pédiatr., April 20, 1894.

DEATH OF DR. E. BRUNO ZINKE.

As we go to press word comes to us of the demise of Dr. E. B. Zinke. The doctor had spent the most of the past four and a half years in European hospitals, mainly in Paris, and returned to this city, which was his adopted home, last October, since which time he has been in delicate health. He was no doubt a victim of over-work in his studies while in Paris, which left him in condition to feebly resist an attack of la grippe, which was succeeded by other complications, notably of his spine, from which he succumbed. Dr. Zinke was for many years a well-known practitioner in Cincinnati.—Lancet Clinic.

SCHUYLKILL COUNTY (PA.) MEDICAL SOCIETY.

The Schuylkill County (Pa.) Medical Society held its annual meeting in Pottsville January 8. The following officers were elected: President, C. W. Bankes, Middleport; Vice President, A. P. Carr, St. Clair; Secretary and Treasurer, George Little, Tamaqua.

MANUFACTURE OF ANTI-TOXINE.

Consul General Mason has sent the State Department at Washington an exhaustive report describing the manufacture of antitoxine at Hoechst, near Frankfort-on-Main, which is the only establishment at which the new specific for diphtheria has yet been produced commercially and in quantities adequately to meet the rapidly increasing demand. This factory is now producing over 2000 doses per day. The report was intended for the use of Congress in case that body considered the subject.